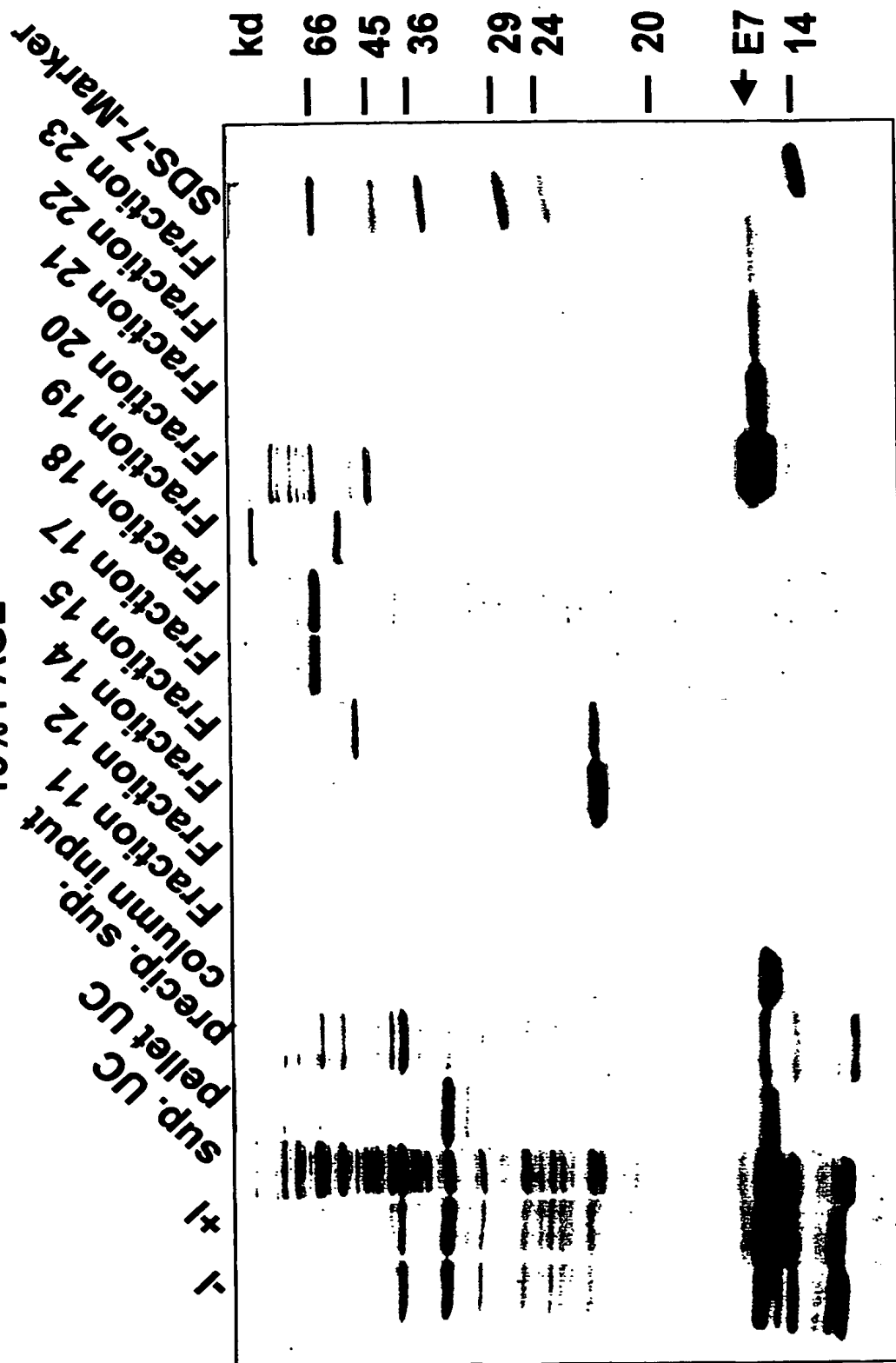


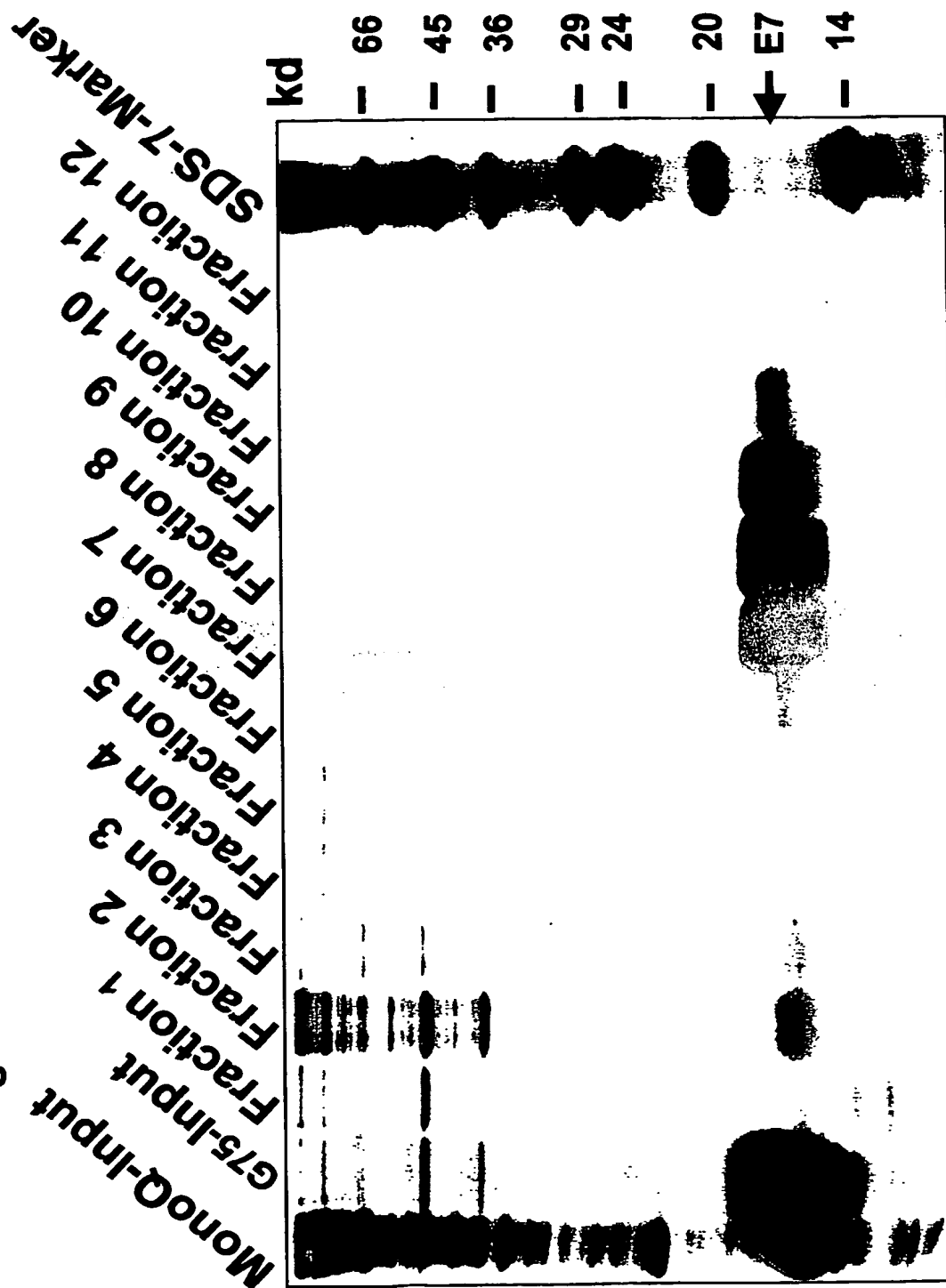
Figure 1A: Purification of bacterially produced E7 via MonoQ-column

15% PAGE

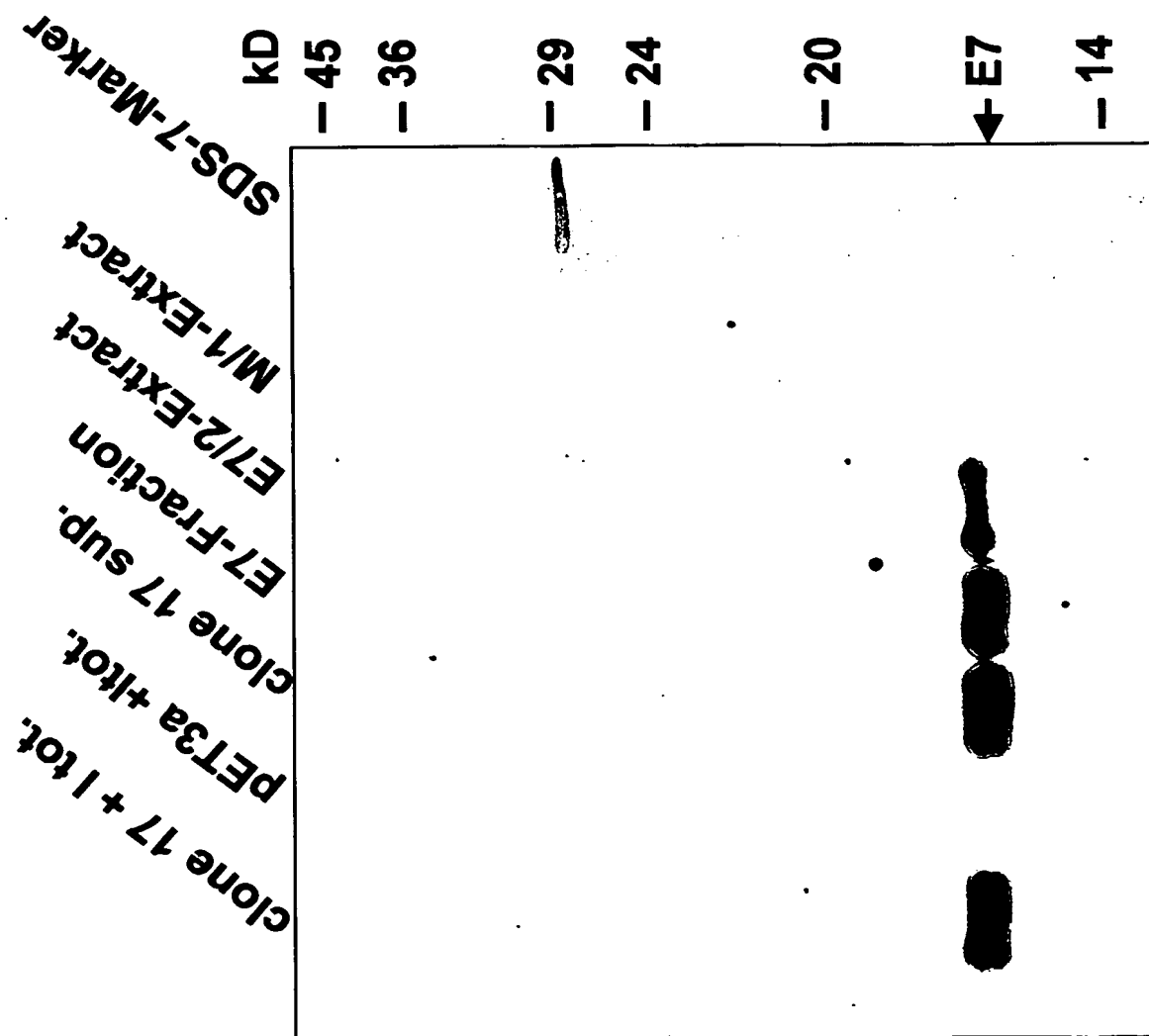


BEST AVAILABLE COPY

Figure 1B: G75 – Gelfiltration, 15% PAGE



**Figure 1C:  
Western Blot,  
Santa Cruz - E7 1:5000**



**Figure 2A:**  
**Westernblot a-HPV-16 E7 Antibody (14/3)**

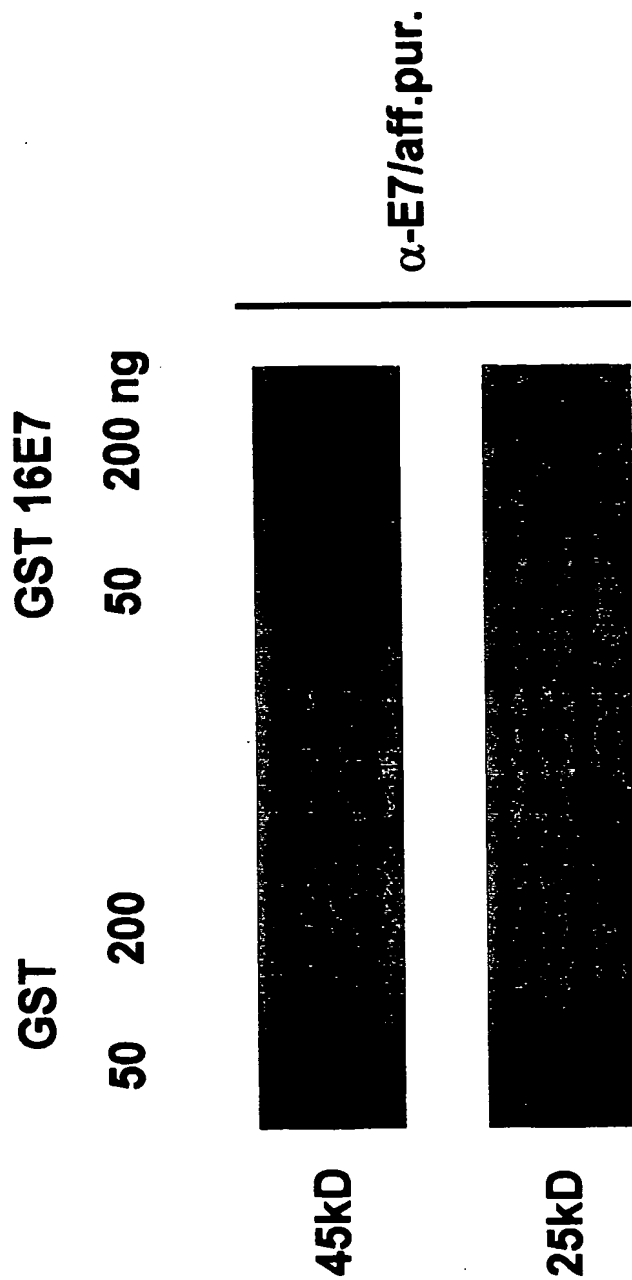
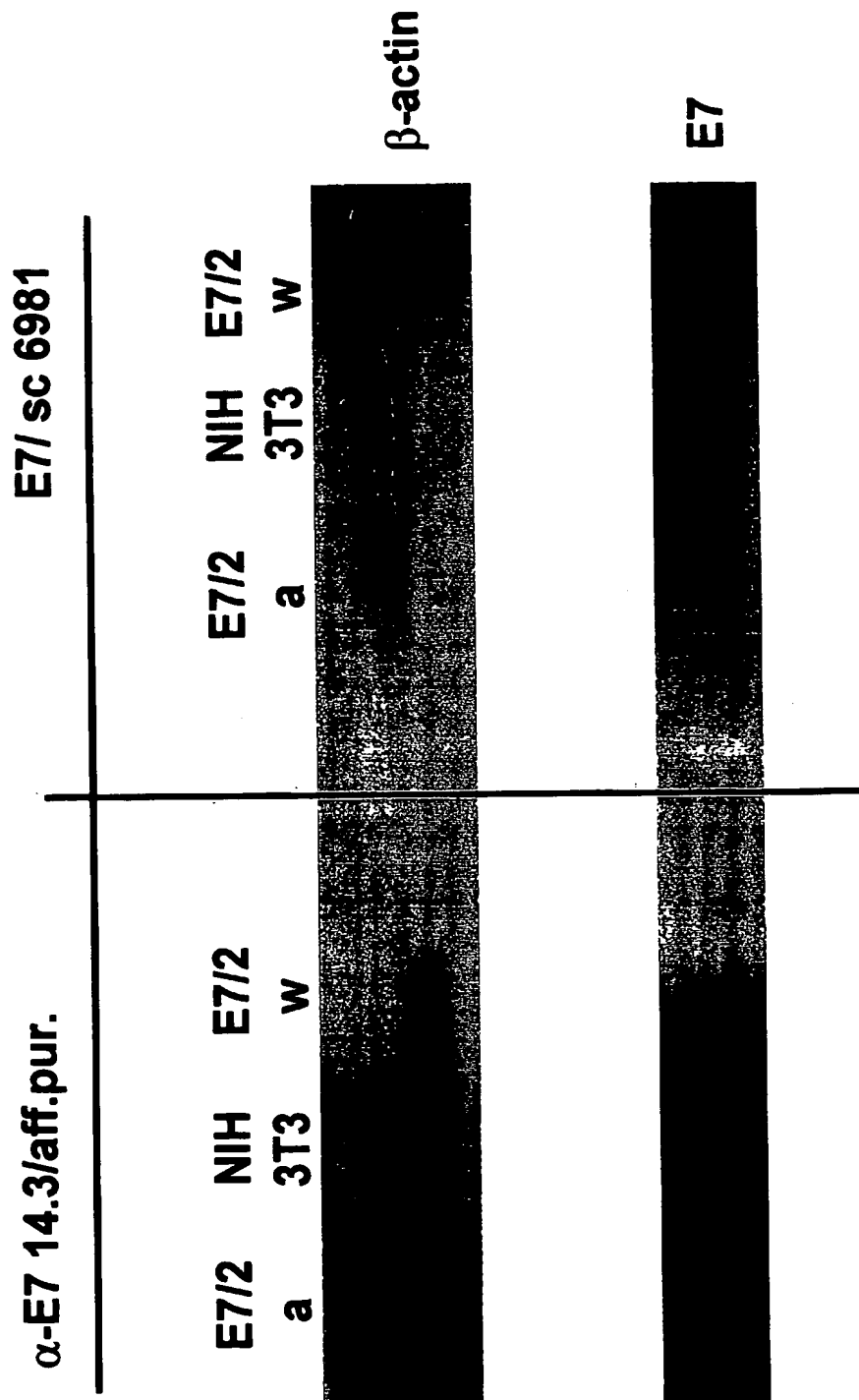
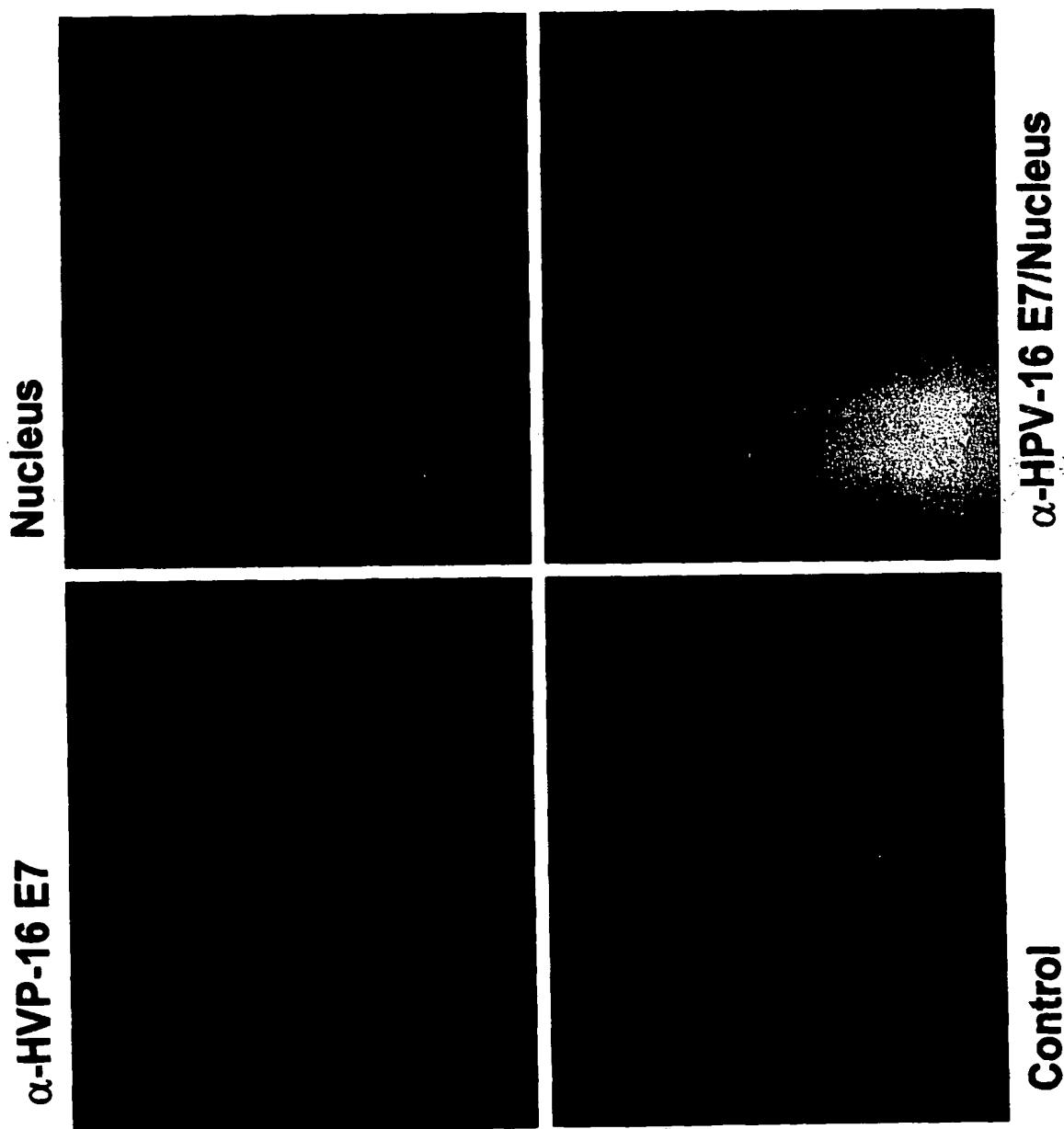


Figure 2B: Westernblot  $\alpha$ -HPV-16 E7 Antibody



6/24

**Figure 3**  
**U-2-OS cells transiently transfected with**  
**pX-HPV-16 E7**



**Figure 4A**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
**Control Immunserum**

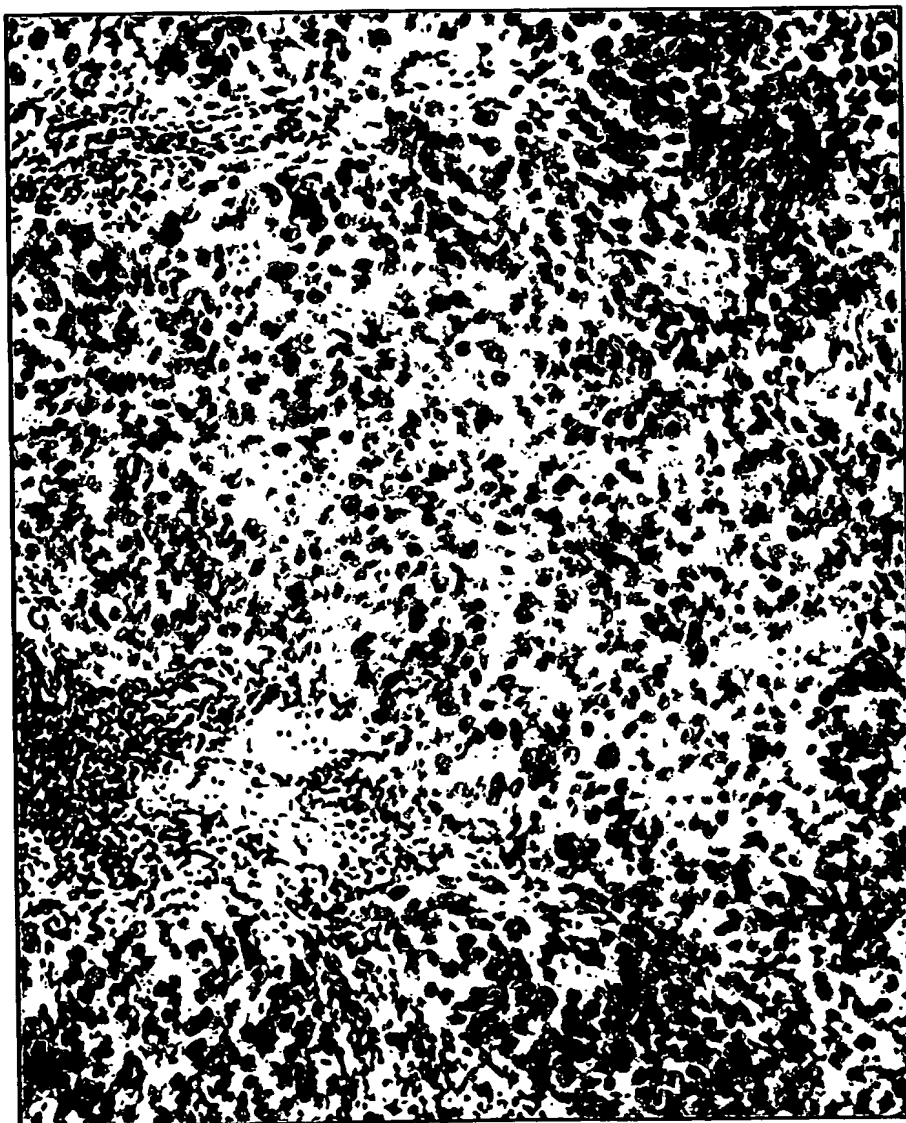


**Figure 4B**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
 **$\alpha$ -HPV-16 E7**

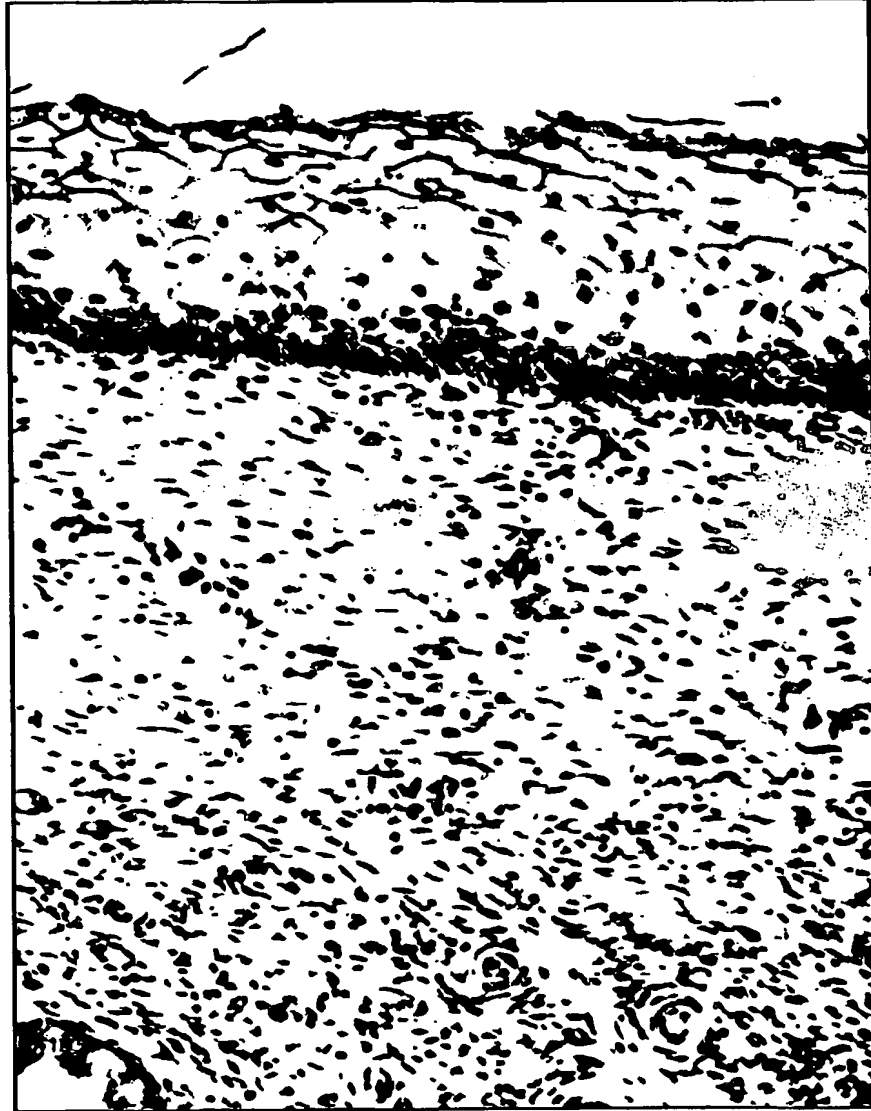




**Figure 4C**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
**stained with  $\alpha$ -HPV-16 E7 (14/3)**

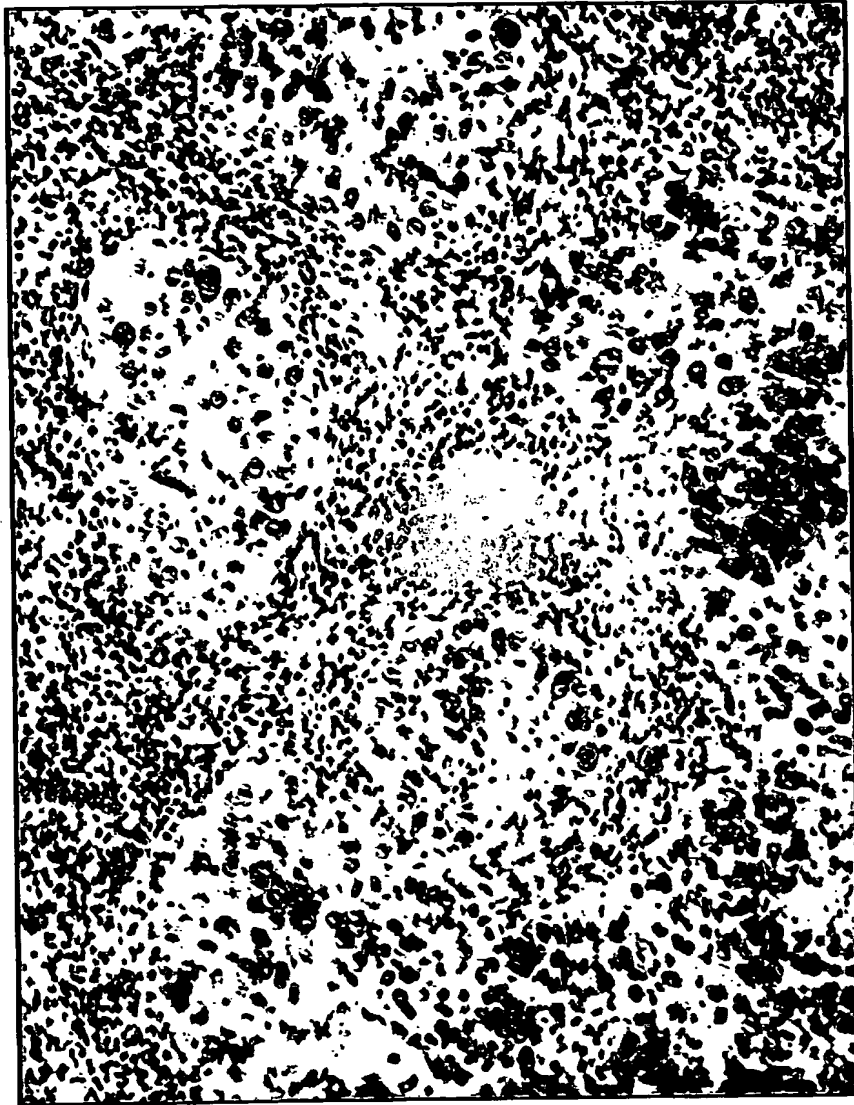


**Figure 4D**  
**Paraffin section stained with  $\alpha$ -HPV-16 E7 (14/3)**  
**Negative control normal squamous epithelium**



11/24

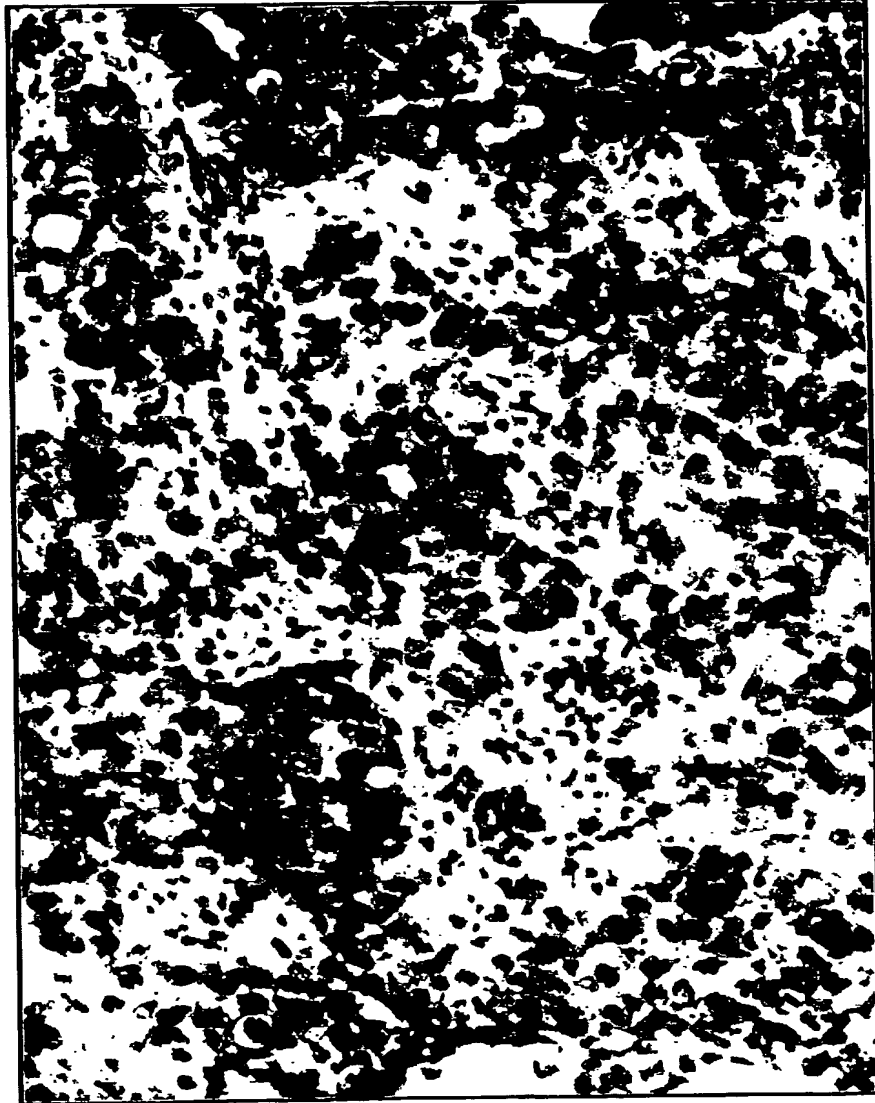
**Figure 4E**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
 **$\alpha$ -HPV-16 E7**



**Figure 4F**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
 **$\alpha$ -HPV-16 E7/Competition 1 $\mu$ g/ $\mu$ l 16 E7**



**Figure 4G**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
 **$\alpha$ -HPV-16 E7**



**Figure 4H**  
**Paraffin section: HPV-16 DNA positive cervical carcinoma**  
**no first antibody**



**Figure 5**  
**E7-positive prostata carcinoma**



**Figure 5cont.  
E7-negative prostate carcinoma**







Figure 6

18/24

Figure 7

**Caski**

**NIH 3T3**

**NIH 3T3/16E7**

**1839 – HPV negative**

**1867 – HPV negative**

**2413 – HPV16**

**3358 – HPV negative**

**3366 – HPV negative**

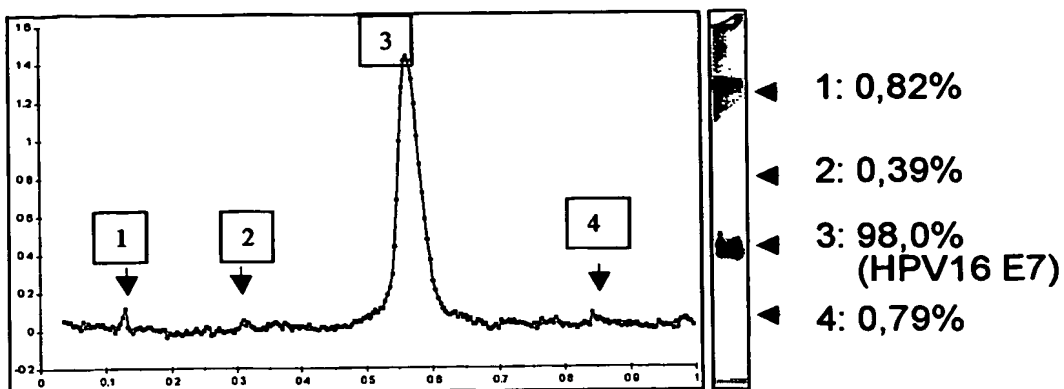
**2227 – HPV45**

**2257 – HPV45**

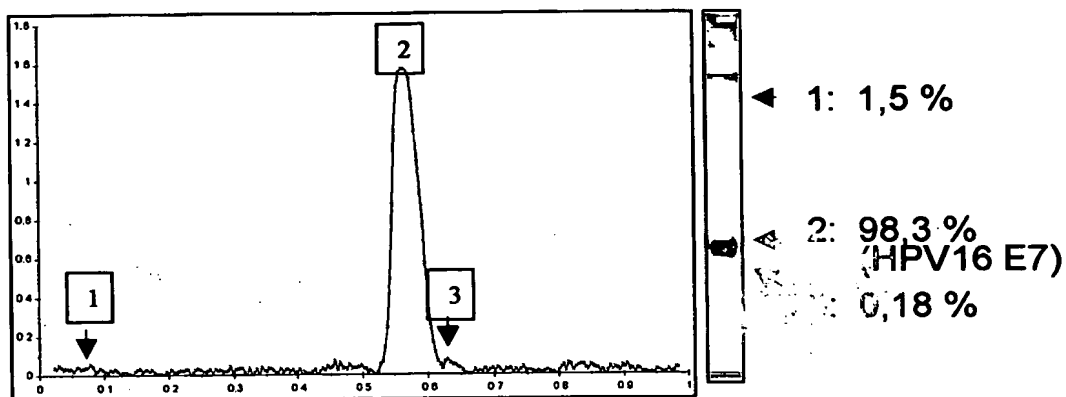
**2295 – HPV16**

**2424 – HPV16**

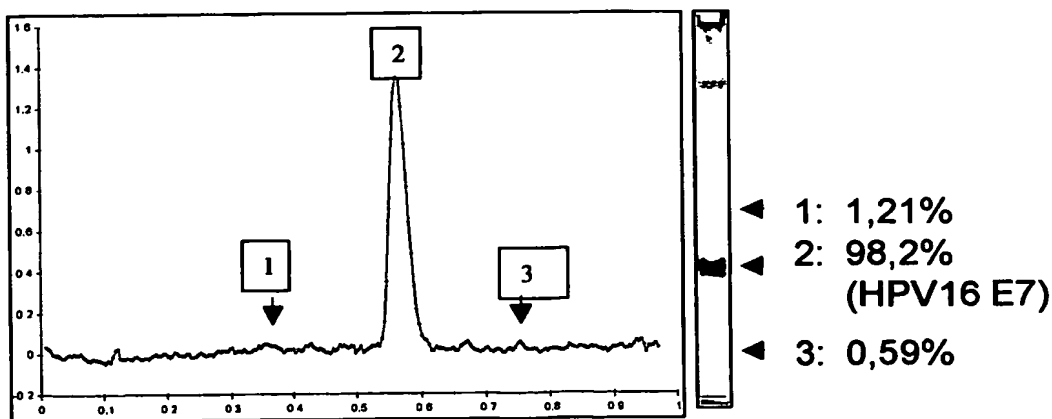
**2622 – HPV negative**



E7 preparation A



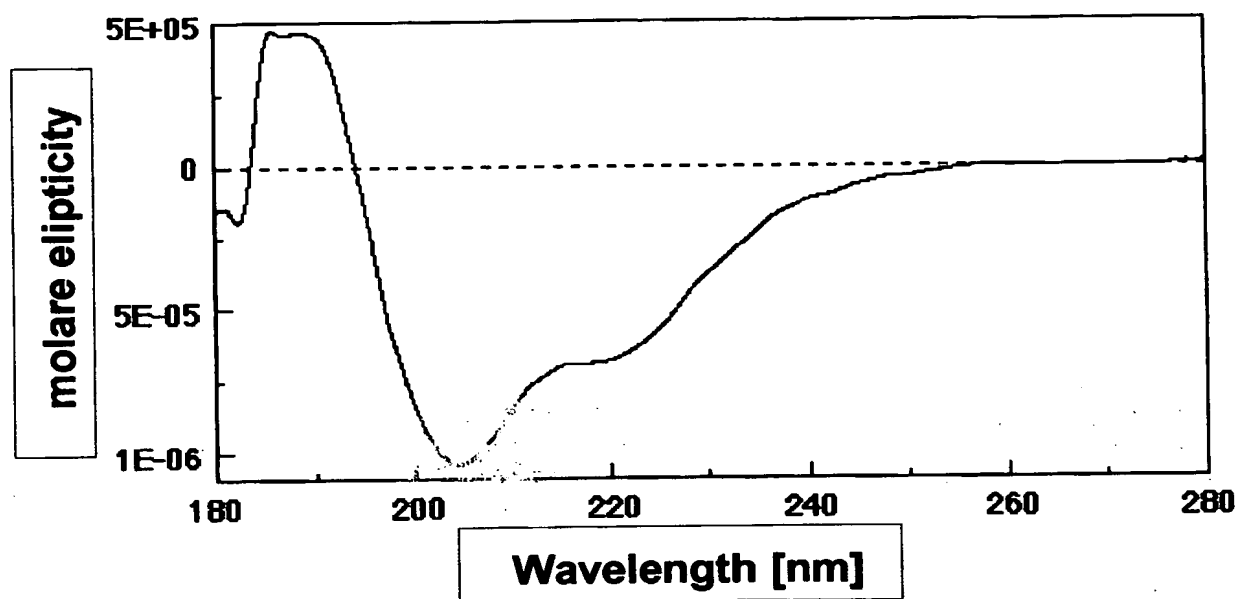
E7 preparation B



E7 preparation C

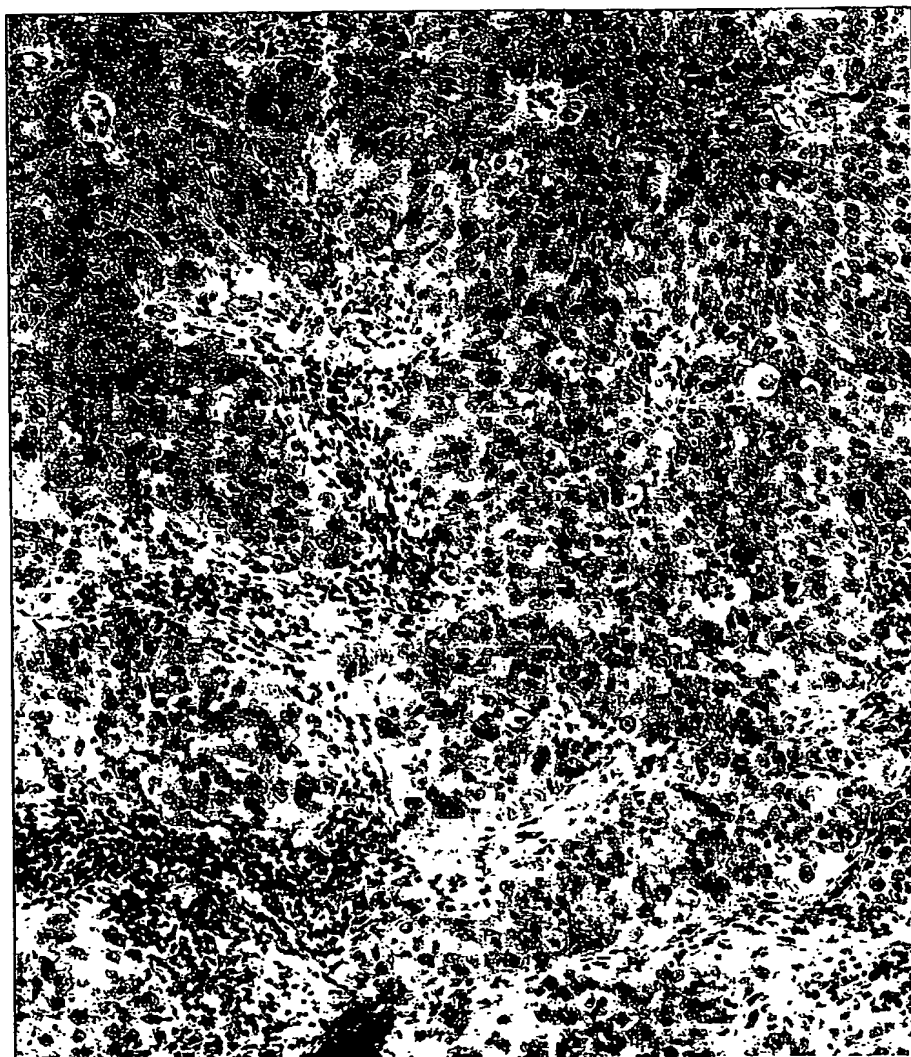
Figure 8

**Figure 9**  
**Circular dichroism spectroscopy measurements:**  
**Secondary structures in HPV16 E7 protein**

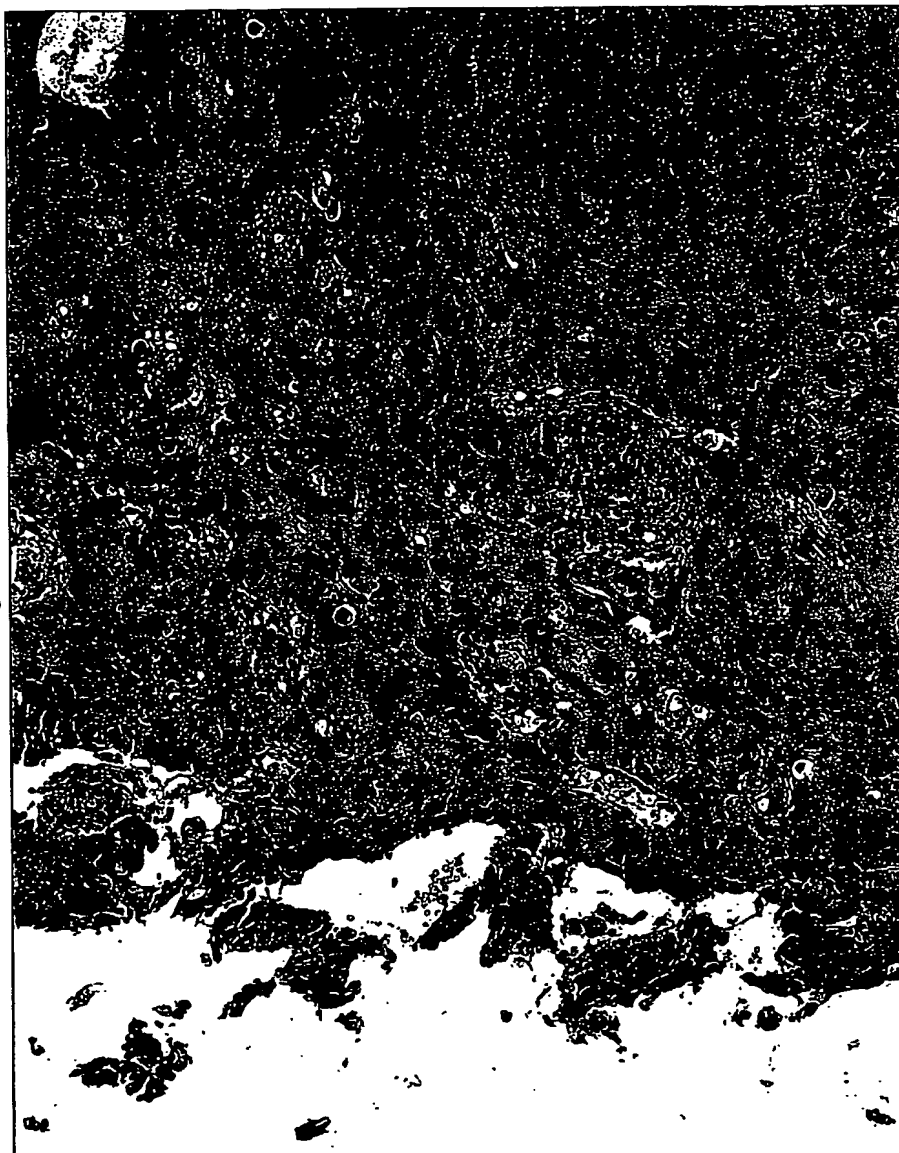


structure	
$\alpha$ -helices	7 - 8 %
$\beta$ -sheets	45 - 47 %
turn	3 - 5 %
coils	40 - 43 %

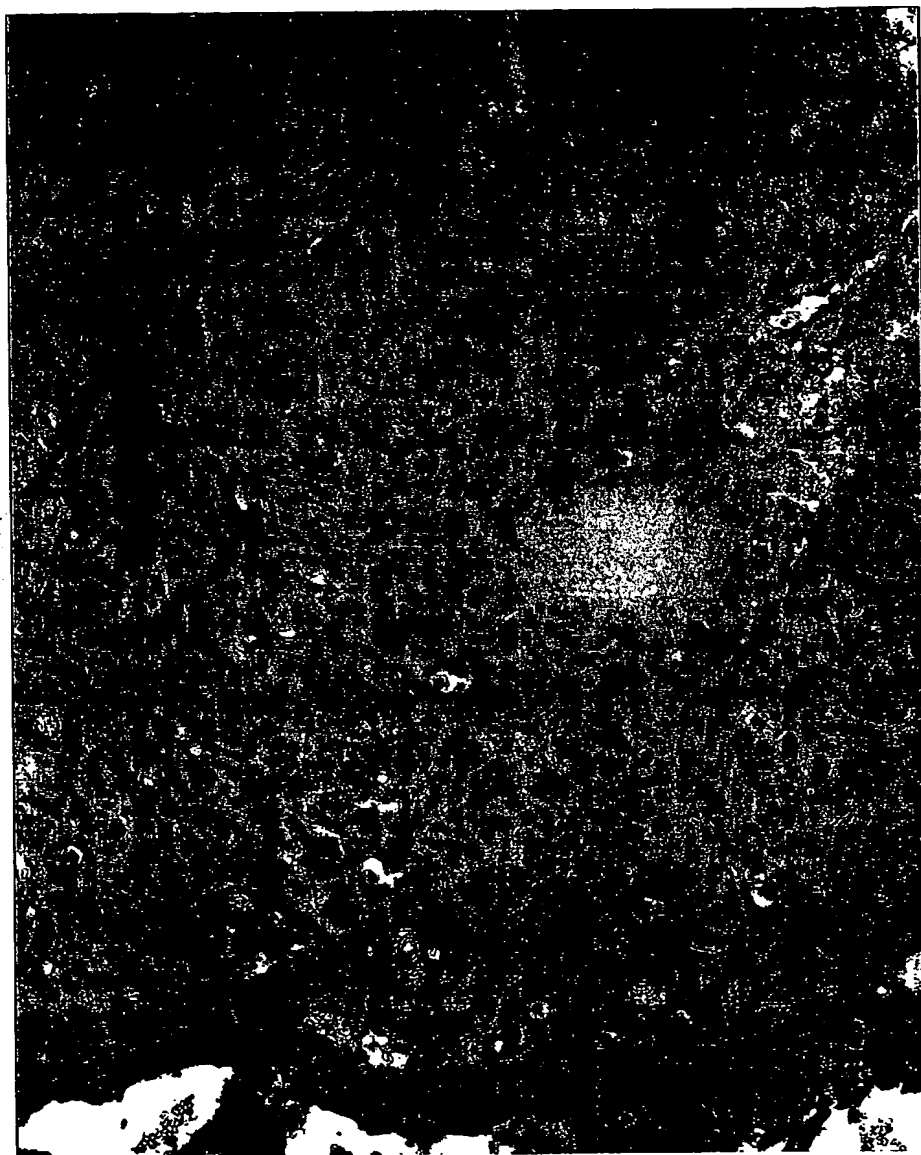
**Figure 10A**  
**Immunohistochemical staining of HPV-16 E7 protein in paraffin embedded**  
**cervical carcinoma tissue sections ;**  
**anti HPV-16 E7 antibody described herein**



**Figure 10B**  
**Immunohistochemical staining of HPV-16 E7 protein in paraffin embedded**  
**cervical carcinoma tissue sections ;**  
**anti HPV-16 E7 antibody Santa Cruz clone ED17**

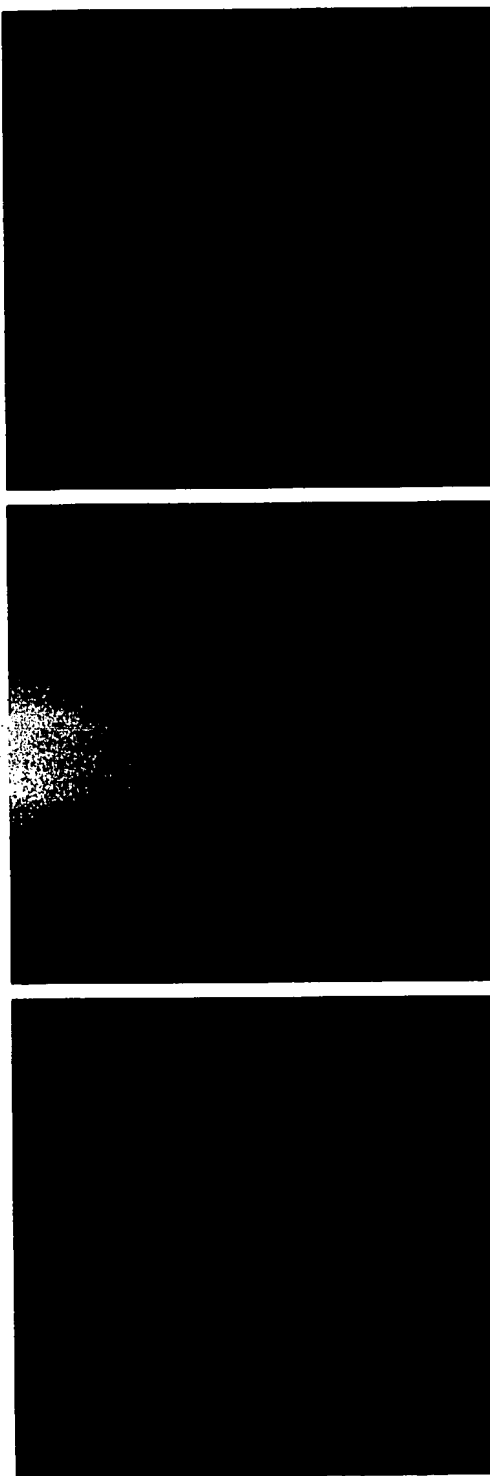


**Figure 10C**  
**Immunohistochemical staining of HPV-16 E7 protein in paraffin embedded**  
**cervical carcinoma tissue sections ;**  
**anti HPV-16 E7 antibody Zymed, clone 8C9X**



**Figure 11**  
**U-2-OS cells transiently transfected with pX-HPV-16 E7**

$\alpha$ -HVP-16 E7 ab described herein	$\alpha$ -HVP-16 E7 ab Zymed, clone 8C9X	$\alpha$ -HVP-16 E7 ab Santa Cruz, clone ED17
--	---	--





**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☒ **FADED TEXT OR DRAWING**
- ☒ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**